



UNITED STATES OF AMERICA

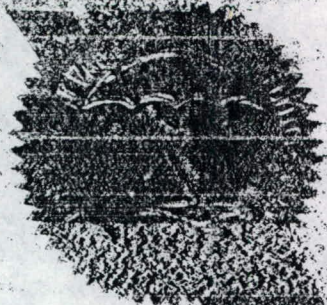
DEPARTMENT OF AGRICULTURE

Patented Dec. 1, 1903

WHEREAS, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN AN APPLICATION FOR PROTECTION OF PLANT VARIETY RIGHTS AND A FURTHER PERSON, CLAIMING VARIOUS RIGHTS OF INVENTION IN SUCH CASES MADE AND PROVIDED THAT THE VARIETY IS NEW AND DISTINCT FROM THE RECORDS OF THE VARIETY PROTECTION OFFICE, AS THE APPLICANT IS DEPOSED IN THE SAID APPLICATION, WHEREAS, WHEN THE EXAMINATION MADE, THE SAID APPLICATION IS FOUND TO BE CORRECT, AND A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE ACT OF MARCH 3, 1903, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS HEREBY GRANTED TO THE SAID APPLICANT, AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT, IN THE EXERCISE OF THE ACQUIRED RIGHT OF PERIODIC REPLACEMENT OF VARIETY IN A PUBLIC REPOSE, AS PROVIDED BY LAW, THE RIGHT OF THE APPLICANT TO THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCTION THEREFROM, TO THE EXTENT OF THE ACT OF MARCH 3, 1903, AS AMENDED, 7 U.S.C. 212 ET SEQ.



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be hereunto affixed, at Washington, D.C., this 1st day of December, 1903.

Samuel H. Hildreth
 Director
 Plant Variety Protection Office
 Department of Agriculture, U.S.A.

John W. Smith
 Secretary of Agriculture

8001



UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

FORM APPROVED
OMB NO. 40-R3822

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY Peto 94C		1b. VARIETY NAME PETO 94C 2/16/83		FOR OFFICIAL USE ONLY PV NUMBER 8100159	
2. KIND NAME Tomato		3. GENUS AND SPECIES NAME Lycopersicum esculentum		FILING DATE 8/31/81	TIME 3:00 A.M. P.M.
4. FAMILY NAME (BOTANICAL) Solanaceae		5. DATE OF DETERMINATION September 5, 1980		FEE RECEIVED \$ 500.00 \$ 250.00	DATE 8/31/81 2/7/83
6. NAME OF APPLICANT(S) Petoseed Co., Inc.		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) Rt. 4, Box 1255 Woodland, CA 95695		8. TELEPHONE AREA CODE AND NUMBER 916-666-0931	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) corporation			10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION California 1962		11. DATE OF INCORPORATION 1962
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: Paul Thomas, Director of Research, Petoseed Co., Inc. Rt. 4, Box 1255, Woodland, CA 95695					

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☐ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☐ YES ☒ NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☐ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

16. ~~DID THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL?~~ ☐ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

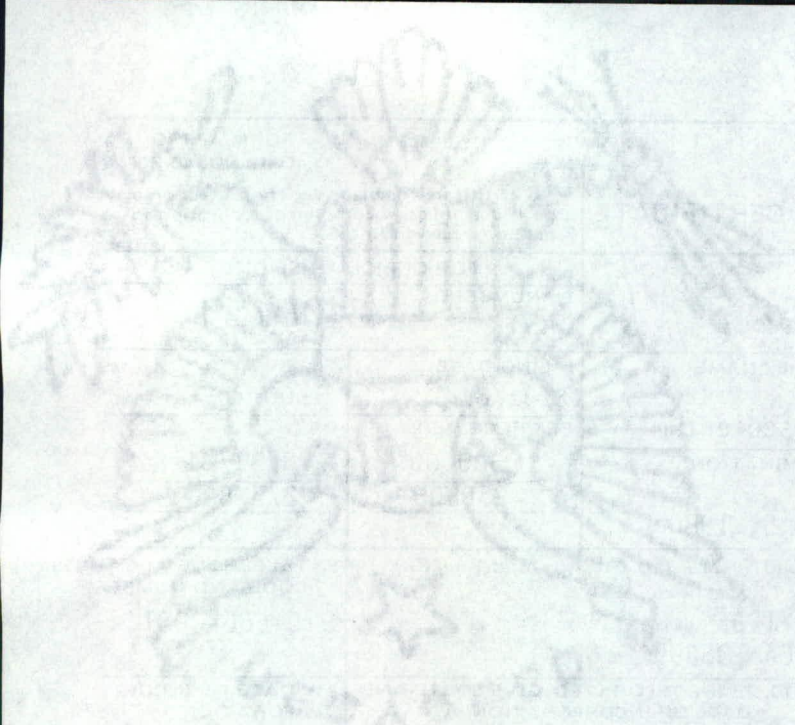
Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

8/27/81
(DATE)

Colin C. W...
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)



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13A - Peto 94C

Peto 94C was developed by conventional tomato breeding methods from crosses made in Woodland, California by Jack Hanna at the Petoseed Research Center

Large numbers of single plant selections were made from the F-2 of each cross and the following generations. Progeny testing for resistance to Fusarium Race II (Fusarium oxysporium f. lycopersici Race II) and Verticillium Wilt Race I (Verticillium alboatrium) was carried out on each generation and the susceptible selections were discarded. Single plant selections were made from field plantings in Woodland, California and at the Peto-Chile farms located near Santiago, Chile in a winter nursery.

University of California VF90 x MHI University of Florida (Woodland, CA 1973)

↓
F-5 Peto 76 (VF2) x Peto 590 (VF)

↓
F6 331 (VF2) Woodland 1978

↓
F7 Peto 94C Woodland 1979

Evaluation of selections from the inbred line 331 (VF2) was made in several locations in California under controlled plantings during 1979 and 1980 with the 94C line being selected as having the best characteristics for processing and mechanical harvest.

Peto 94C has homozygous resistance for Verticillium Wilt Race I (Verticillium alboatrium) and Fusarium Wilt Race II (Fusarium oxysporium f. lycopersici).

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Exhibit A
Supplement 1

STATEMENT OF UNIFORMITY

Peto 94C has homozygous resistance for Verticillium Wilt Race I (Verticillium alboatrium) and Fusarium Wilt Race II (Fusarium oxysporium f. lycopersici).

Peto foundation stock seed of Peto 94C was made during 1980 and found to be very uniform in the 1981 planting. From the plantings to date there are no off types present. The seed is now in the F-9 generation.

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Exhibit A

Supplement 2

STATEMENT OF STABILITY OF PETO 94C TOMATO
Application No. 8100159

Peto 94C was grown in the crop seasons 1980 and 1981 in trial plantings under the control of Petoseed in the following California Counties:

1. Imperial
2. Orange
3. Ventura
4. Fresno
5. San Joaquin
6. Sacramento
7. Yolo
8. Sutter

Peto 94C was found to be stable and uniform in trials located in the California Counties listed above. Seed increases of Peto 94C were made in 1980 and 1981 under the control of the Stock Seed Department of Petoseed in Saticoy, California. All lots are identified as Peto 94C. No genetic variants were found in the seed increases or field plantings. Peto 94C was found to be stable for 3 generations.

Additional plantings of Peto 94C were observed in Imperial and Fresno Counties in June, 1982. The 1982 plantings show the Peto 94C to be a stable line. No genetic variants were found in the 1982 plantings.

Standard testing procedures for Race 2 Fusarium Wilt resistant were conducted by the Plant Pathology Department of Petoseed in Woodland, California. The results of the test show that Peto 94C is 100% resistant to Race 2 Fusarium.

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U.S. DEPARTMENT OF THE INTERIOR



PETOSEED CO., INC. BREEDERS-GROWERS

P.O. BOX 4206, SATICOY, CALIF. 93004-0206 U.S.A. • TEL. 805-647-1188 CABLE PETOSEED

TELEX NO. 65-9247

REPLY TO: RT. 4, BOX 1255, WOODLAND, CA 95695

PHONE (916) 666-0931

April 13, 1984

Dr. Kenneth H. Evans, Commissioner
Plant Variety Protection Office
United States Department of Agriculture
National Agricultural Library Building
Beltsville, Maryland 20705

Dear Dr. Evans:

SUBJECT: TOMATO CERTIFICATE NO. 8100159 (PETO 94-C) AND 8100160 (PETO 95-43)

*Revised
Exhibit B
Peto 94-C;
Part A.
Rec'd 4/17/84
(orig. with
rest of letter)*
We will follow your suggestion of March 26, 1984 in regards to clarifying the PVP for Peto 94-C and Peto 95-43 by stating that Peto 94-C is most similar to Peto 94 and Peto 95-43 is most similar to Peto 95.

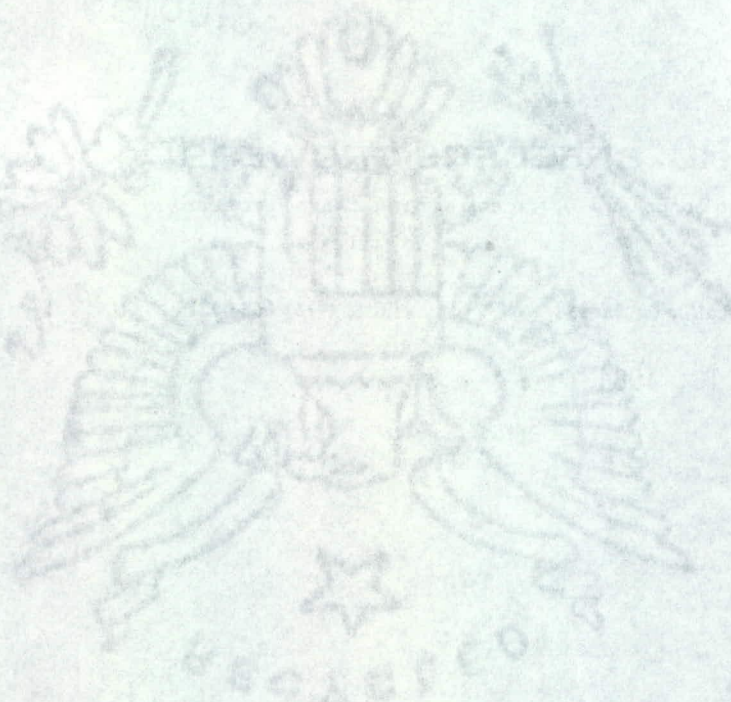
The major differences as noted between Peto 94-C and Peto 94 are as follows:

1. Peto 94-C is 9-11 days earlier than Peto 94 based upon average number of days from emergence to 90% ripe (Peto 94-C averages 115 to 122 days to 90% maturity compared to Peto 94, which averages 124 to 131 days to 90% maturity).
2. Peto 94-C has smaller plant size than Peto 94 based upon measurements of plants at 90% ripe (Peto 94-C 119 cm to 122 cm and Peto 94 128 cm to 131 cm).

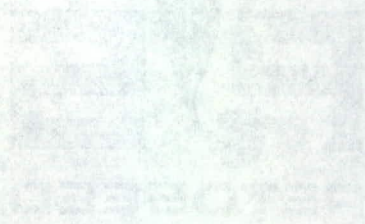
The major differences between Peto 95-43 and Peto 95 are as follows:

1. Peto 95-43 has slightly larger fruit sizes, averaging 2.58 to 2.7 ounces per fruit as compared to Peto 95, which averages 2.20 to 2.26 ounces per fruit.

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OFFICE OF THE ATTORNEY GENERAL



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8100159

Revised Exhibit B
for 'Peto 94-C'
Part B.

Orig. Rec'd 6/11/84

AMENDED EXHIBIT B STATEMENT - PETO 94-C TOMATO

The major differences as noted between Peto 94-C and Peto 94 are as follows:

1. Peto 94-C is 9-11 days earlier than Peto 94 based upon average number of days from emergence to 90% ripe (Peto 94-C averages 115 to 122 days to 90% maturity compared to Peto 94, which averages 124 to 131 days to 90% maturity).
2. Peto 94-C has smaller plant than Peto 94 based on measurements of plant at approximately 90% ripe (measurements are from tip of plant on one side of bed to tip of plant on opposite side of bed). Peto 94-C is 119 cm to 122 cm and Peto 94 is 128 cm to 131 cm.

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, GRAIN, AND SEED DIVISION
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY
TOMATO (*Lycopersicon esculentum* Mill.)

Name of applicant Petoseed Co., Inc.	Temporary designation Peto 94C	Variety Name <div style="text-align: center;"> z PETO 94-C </div>
Address (Street and No. or R.F.D. No., City, State, Zip) Rt. 4, Box 1255 Woodland, CA 95695		<div style="border: 1px solid black; padding: 5px;"> FOR OFFICIAL USE ONLY PVPO NUMBER <div style="text-align: center; font-size: 1.2em;">8100159</div> </div>

Choose responses which best represent your variety in the characters below. When a single quantitative value is requested (e.g. fruit weight), your answer should be the mean of an adequate, unbiased sample of plants. The applicant variety should be compared with at least one well-known standard check variety of the same type, and grown in the same trial(s). The characters on this form should be described from plants grown under normal conditions of culture for the variety. Indicate by a check whether trial data are from greenhouse ☐ or field ☒ plantings. Trials direct-seeded ☒ or transplanted ☐. Give locations and dates of trials Woodland and Saticoy, CA
1979-80. Use leading zeroes when necessary (e.g. 009 or 00811, etc.).
Complete this form as fully as possible for best characterization of the variety.

1. SEEDLING: (2-15 cm, well-illuminated)

- ☒ Anthocyanin in hypocotyl: 1 = absent 2 = present
☒ Cotyledon: 1 = normal 2 = giant

2. MATURE PLANT:

- ☒ Growth: 1 = indeterminate 2 = semi-determinate 3 = determinate
☒ Size (compared to others of its growth type): 1 = small 2 = medium 3 = large
☒ Habit: 1 = sprawling (decumbent) 2 = semi-erect 3 = erect
☒ Foliage cover: 1 = light 2 = moderate 3 = heavy

3. STEM:

- ☒ Internode length (between the 1st and 4th inflorescences):
 1 = short () 2 = intermediate () 3 = long ()
☒ Branching: 1 = sparse (Brehm's Solid Red) 2 = intermediate ()
 3 = profuse (UC82)
☒ Branching at cotyledonary or first leafy node: 1 = present 2 = absent
☒ Pubescence: 1 = smooth (no long hairs) 2 = sparsely hairy (scattered long hairs)
 3 = densely hairy or canescent
☒ No. of nodes below the first inflorescence:
 1 = few () 2 = intermediate () 3 = many ()
☒ No. of nodes (leaves) between inflorescences
☒ Thickness: 1 = slender, weak 2 = medium thickness 3 = thick, stiff

4. LEAF (Mature leaf under the 1st to 3rd inflorescence):

- ☒ Type: 1 = tomato 2 = potato
☒ Division: 1 = once-pinnate 2 = intermediate (pinnate-bipinnate)
 3 = bipinnate, many small leaflets with the large ones
☒ Attitude: 1 = semi-erect 2 = horizontal 3 = drooping
☒ Leaflet blade: 1 = thin 2 = medium 3 = thick
☒ Bases of major leaflets: 1 = even 2 = oblique (the sides offset on petiole)
☒ Margins of major leaflets: 1 = ~~evenly~~ entire 2 = shallowly toothed or scalloped
 3 = deeply toothed or cut, especially towards base
☒ Marginal rolling: 1 = absent 2 = present

1 Surface of major leaflets: 1 = smooth 2 = rugose (bumpy or veiny)
1 Leaflet: 1 = normal 2 = slightly wilted 3 = wilted
2 Shape of major leaflets: 1 = broadly ovate 2 = ovate to lanceolate
3 = slender and lanceolate, tapered to a point
2 Pubescence or hairiness: 1 = smooth 2 = normal 3 = wooly
4 Color of leaflets: 1 = light green (Earlinorth) 2 = medium green ()
3 = gray-green () 4 = dark green (UC82)
4 Color of leaf on check variety (same scale): Variety

1 Type: 1 = simple (racemose) 2 = forked (2 major axes) 3 = compound (much branched)
2 No. of flowers setting fruit (in 2nd or 3rd inflorescence):
1 = 1-4, 2 = 4-8, 3 = 8-12, 4 = 12 or more

☐ Calyx: 1 = normal (lobes awl-shaped) 2 = macrocalyx (lobes large, leaflike)
3 = fleshy

☐ Flower color: 1 = yellow 2 = old gold 3 = white or tan

☐ Style exsertion: 1 = included 2 = even with stamens 3 = exserted

☐ Style pubescence: 1 = absent 2 = sparse 3 = dense

☐ Anthers: 1 = all fused into tube 2 = separating into 2 or more groups at anthesis

☐ Fasciation (1st flower of 2nd or 3rd inflorescence):
1 = absent 2 = occasionally present 3 = frequently present

1	Abscission layer: 1 = present (pedicellate) 2 = absent (jointless)
0 8	mm. Length of pedicel (from abscission layer or joint to calyx attachment)
5	Mature fruit: Maximum diameter:
	1 = small cherry (< 20 mm) 2 = large cherry (20-35 mm)
	3 = cocktail (35-48 mm) 4 = U.S. extra small (48-54 mm)
	5 = U.S. small (54-58 mm) 6 = U.S. medium (58-64 mm)
	7 = U.S. large (64-73 mm) 8 = U.S. extra large (73-88 mm)
	9 = U.S. maximum large (88-100 mm) 10 = U.S. maximum large (> 100 mm)

074	g	Fruit weight	071	g	Check variety	UC82
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(1)



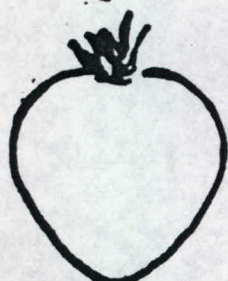
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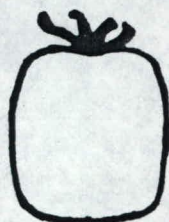
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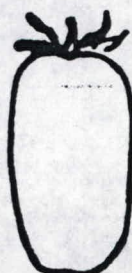
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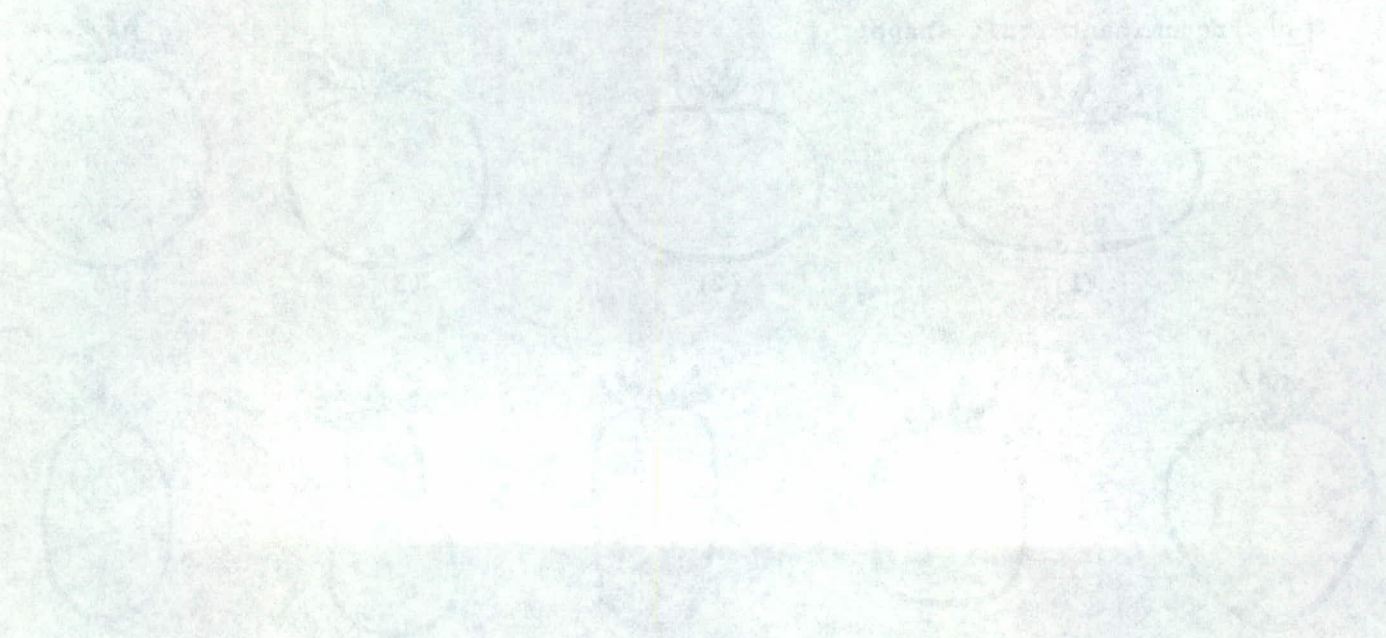
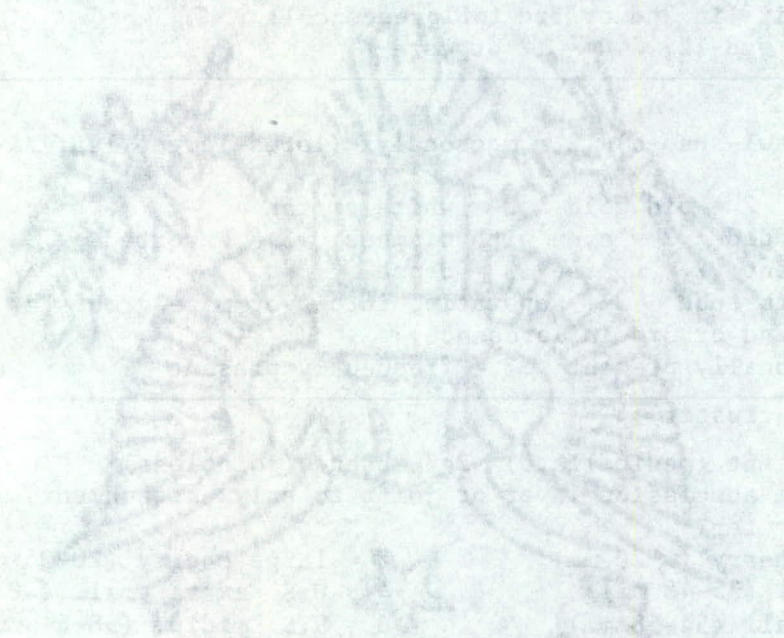


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7. FRUIT (3rd fruit of 2nd or 3rd cluster):

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1 Shape of transverse section:



1=round



2=flattened



3=angular



4=irregular

2 Shape of blossom end:



1=indented



2=flat



3=nipped



4=tapered

1 Shape of stem end:



1=flat



2=indented

1 Shape of pistil scar:



1=dot



2=stellate



3=linear



4=irregular

1 Fruit surface: 1 = smooth 2 = slightly fasciated 3 = moderately fasciated

1 Fruit color (mature-green stage):

1 = light green ('Lanai', VF145-F5) 2 = Lt. gray-green ()

3 = apple green ('Heinz 1439 VF') 4 = dark green ()

2 Fruit pattern (mature-green stage): 1 = green shouldered 2 = uniform green

5 Mature fruit color (full-ripe): 1 = white 2 = yellow 3 = tangerine

4 = pink 5 = red 6 = brownish-red

7 = greenish 8 = other (specify) _____

2 Flesh color (full-ripe): 1 = yellow 2 = red 3 = crimson 4 = other _____

1 Epidermis: 1 = normal 2 = easy-peel

2 Epidermis color: 1 = colorless 2 = yellow

2 Epidermis thickness: 1 = thin 2 = average 3 = thick

3 Thickness of pericarp: 1 = thin (< 3 mm) 2 = medium (3-6 mm) 3 = thick (> 6 mm)

3 Thickness of pericarp of check variety (same scale) Variety: _____

1 Core size: 1 = coreless 2 = small 3 = medium 4 = large

1 Core shape: 1 = solid, unbranched 2 = branched

1 Core texture: 1 = soft, edible 2 = tough or fibrous

1 Stem scar size: 1 = small () 2 = medium () 3 = large ()

2 No. of locules: 1 = two 2 = three and four 3 = five or more

5 Fruit firmness¹ (minimum table-ripe):

1 = extra-soft ('Gardener') 2 = very soft ('Valiant') 3 = soft ('Campbell 28')

4 = fairly firm ('Tropic') 5 = firm ('MH-1') 6 = very firm ('UC-82')

8. PHENOLOGY (Growing degree days, or heat units on a base temperature of 51° F are preferable--but you may report either growing degree days or calendar days. Circle either "days" for calendar days, or "heat units" for growing degree days):

Days/heat units from seed to first open flower:

4 5 days, Application variety

4 5 days, Check variety No. 1

UC82

5 0 days, Check variety No. 2

VF145-7879

Days/heat units from seed/transplant (indicate which) to first ripe fruit:

0 9 0 days, Application variety

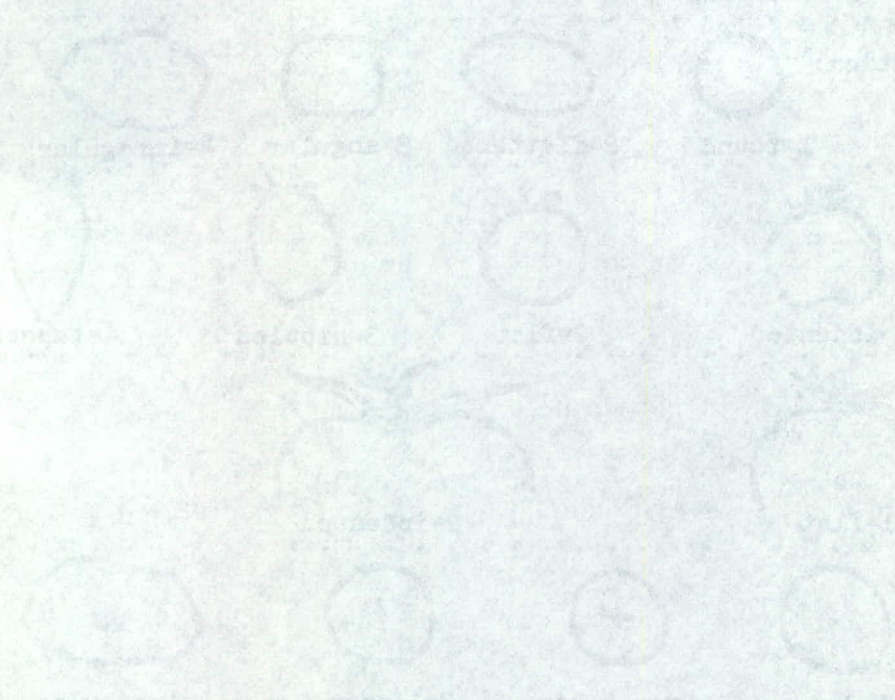
0 9 4 days, Check variety No. 1

UC82

0 9 8 days, Check variety No. 2

VF145-7879'

¹For definitions of these subjective terms see Kader & Morris (1976) In: Proc. 2nd Tomato Quality Workshop.



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TOMATO - 4

8. PHENOLOGY (Growing degree days, or heat units on a base temperature of 51° F are preferable--but you may report either growing degree days or calendar days. Circle either "days" or calendar days, or "heat units" for growing degree days) (Continued):

Days/heat units from seed/transplant (indicate which) to once-over harvest, if applicable:

days, Application variety days, Check variety No. 1 UC82
 days, Check variety No. 2 VF145-7879

Days/heat units from breaker to full-ripe stage:

days, Application variety days, Check variety No. 1
 days, Check variety No. 2

Shelf life of ripe fruit:

days, Application variety days, Check variety No. 1
 days, Check variety No. 2

- ☐ Fruiting season: 1 = long ('Marglobe') 2 = medium ('Westover')
 3 = short, concentrated ('VF 145') 4 = very concentrated ('UC 82')
☐ Relative maturity: 1 = early 2 = medium early 3 = medium
 4 = medium late 5 = late

9. ADAPTATION (if more than one category applies, list all in rank order):

☐☐ Culture: 1 = field 2 = greenhouse
☐☐ 1 = unstaked 2 = staked or trellised
☐☐ Principal use(s): 1 = home garden 2 = fresh market
 3 = processing 4 = other
☐ Machine harvest: 1 = not adapted 2 = adapted
☐☐ Recommended region: 1 = Northeast/Midatlantic 2 = Southeast
☐☐ 3 = Midwest/Great Lakes 4 = South-central
 5 = Great Plains 6 = Intermountain West
 7 = Northwest 8 = Central California
 9 = Southwest/So. California 10 = General
 11 = Other (specify)
☐ Growing season temperature: 1 = cool 2 = normal warm 3 = hot 4 = general
☐ Growing season humidity: 1 = humid 2 = semi-arid 3 = general
☐ Soils: 1 = mineral 2 = organic 3 = general

10. RESISTANCE OR TOLERANCE TO ENVIRONMENTAL STRESS:

- ☐ High temperature fruit set (subjective evaluation based on fruit set at temperatures that normally inhibit set in area of evaluation):
 1 = poor 2 = fair 3 = good ('Summertime') AREA Central California
☐ Low temperature fruit set (subjective evaluation based on fruit set at low temperatures that normally inhibit set):
 1 = poor 2 = fair 3 = good ('Veecrop')
 AREA
☐ Low temperature seed germination: 1 = poor () 2 = fair ()
 3 = good ()

11. RESISTANCE TO FRUIT DISORDERS (Use code: 0=unknown, 1=susceptible, 2=resistant):

<input type="checkbox" value="0"/> Blossom end rot	<input type="checkbox" value="2"/> Bursting
<input type="checkbox" value="2"/> Catface	<input type="checkbox" value="2"/> Cracking, radial
<input type="checkbox" value="2"/> Cracking, concentric	<input type="checkbox" value="0"/> Fruit pox
<input type="checkbox" value="0"/> Gold fleck	<input type="checkbox" value="0"/> Graywall or blotchy ripening

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12. DISEASE AND PEST REACTION (Use code: 0=not tested, 1=susceptible, 2=resistant) If claim of novelty is based wholly or in part upon disease resistance, trial data should be appended (Exhibit D) and should include date and location of trial(s), method of testing, reaction of application variety, and reaction of check varieties (identified by name).

Viral Diseases:

- | | | |
|---|--|--|
| <input type="checkbox"/> Cucumber mosaic | <input type="checkbox"/> Curly top | <input type="checkbox"/> Potato-Y virus |
| <input type="checkbox"/> Tobacco mosaic, Race 0 | <input type="checkbox"/> Tobacco mosaic, Race 1 (Tm 1) | <input type="checkbox"/> Tobacco mosaic, Race 2 (Tm 2) |
| <input type="checkbox"/> Tobacco mosaic, Race 2 ² (Tm 2 ²) | <input type="checkbox"/> Tomato spotted wilt | <input type="checkbox"/> Tomato yellows |
| <input type="checkbox"/> Other (specify) _____ | | |

Bacterial Diseases:

- | | |
|---|---|
| <input type="checkbox"/> Bacterial canker (<i>Corynebacterium michiganense</i>) | <input type="checkbox"/> Bacterial soft rot (<i>Erwinia carotovora</i>) |
| <input type="checkbox"/> Bacterial speck (<i>Pseudomonas tomato</i>) | <input type="checkbox"/> Bacterial spot (<i>Xanthomonas vesicatorium</i>) |
| <input type="checkbox"/> Bacterial wilt (<i>Pseudomonas solanacearum</i>) | |
| <input type="checkbox"/> Other bacterial disease (specify) _____ | |

Fungal Diseases:

- | | |
|--|--|
| <input type="checkbox"/> Anthracnose (<i>Colletotrichum</i> spp.) | <input type="checkbox"/> Botrytis rot or mold (<i>B. cinerea</i>) |
| <input type="checkbox"/> Brown root rot or corky root (<i>Pyrenochaeta lycopersici</i>) | |
| <input type="checkbox"/> Early blight (<i>Alternaria solani</i>) defoliation | <input type="checkbox"/> Collar rot or stem canker (<i>Alternaria solani</i>) |
| <input type="checkbox"/> Fusarium wilt, Race 2 (<i>F. oxysporum</i> f. <i>lycopersici</i>) | <input type="checkbox"/> Fusarium wilt, Race 1 (<i>F. oxysporum</i> f. <i>lycopersici</i>) |
| <input type="checkbox"/> Late blight, Race 0 (<i>Phytophthora infestans</i>) | <input type="checkbox"/> Gray leaf spot (<i>Stemphylium solani</i> , <i>S. floridanum</i>) |
| <input type="checkbox"/> Leaf mold, Race 1 (<i>Cladosporium fulvum</i>) | <input type="checkbox"/> Late blight, Race 1 (<i>Phytophthora infestans</i>) |
| <input type="checkbox"/> Leaf mold, Race 3 (<i>C. fulvum</i>) | <input type="checkbox"/> Leaf mold, Race 2 (<i>C. fulvum</i>) |
| <input type="checkbox"/> Nailhead spot (<i>Alternaria tomato</i>) | <input type="checkbox"/> Leaf mold, other races (specify) _____ |
| <input type="checkbox"/> Rhizoctonia soil rot (<i>R. solani</i>) | <input type="checkbox"/> Phytophthora root rot (<i>P. parasitica</i>) |
| <input type="checkbox"/> Southern blight (<i>Sclerotium rolfsii</i>) | <input type="checkbox"/> Septoria leaf blight (<i>Septoria</i> spp.) |
| <input type="checkbox"/> Verticillium wilt, Race 1 (<i>V. albo-atrum</i>) | <input type="checkbox"/> Target leafspot (<i>Corynespora casijicola</i>) |
| <input type="checkbox"/> Other fungal diseases (specify) _____ | <input type="checkbox"/> Verticillium wilt, Race 2 (<i>V. albo-atrum</i>) |

Insect and Pests:

- | |
|--|
| <input type="checkbox"/> Colorado potato beetle (<i>Leptinotarsa decemlineata</i>) |
| <input type="checkbox"/> Root knot nematode (<i>Meloidogyne incognita</i>) |
| <input type="checkbox"/> Spider mites (<i>Tetranychus</i> spp.) |
| <input type="checkbox"/> Sugar beet army worm (<i>Spodopora exigua</i>) |
| <input type="checkbox"/> Tobacco flea beetle (<i>Epitrix hirtipennis</i>) |
| <input type="checkbox"/> Tomato hornworm (<i>Manduca quinquemaculata</i>) |
| <input type="checkbox"/> Tomato fruitworm (<i>Heliothis zea</i>) |
| <input type="checkbox"/> Whitefly (<i>Trialeurodes vaporariorum</i>) |
| <input type="checkbox"/> Other (specify) _____ |

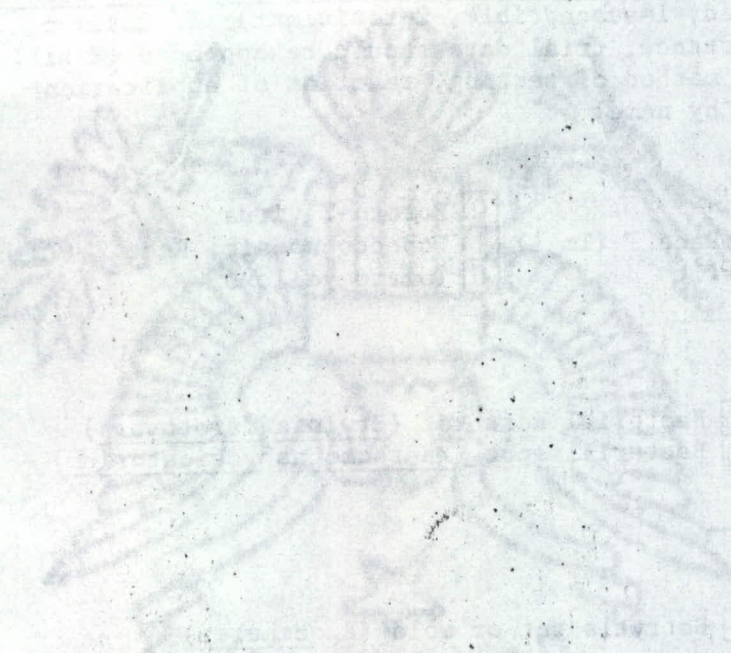
Pollutants:

- | | | |
|--------------------------------|---|--|
| <input type="checkbox"/> Ozone | <input type="checkbox"/> Sulfur dioxide | <input type="checkbox"/> Other (specify) _____ |
|--------------------------------|---|--|

REFERENCES

- Anonymous, 1976. All About Tomatoes. Ortho Books, Chevron Chemical Co., San Francisco. In three volumes: Midwest/Northeast Edition, West Edition, and South Edition.
- Ware, G. W. & J. P. McCollum, 1968. Producing Vegetable Crops. The Interstate Printer & Publishers, Inc., Danville, Illinois. (Chapter 30, pp. 451-473, "Tomatoes".)
- Webb, R. E., T. H. Barksdale, & A. K. Stoner, 1973, "Tomatoes" pp. 344-361 In: Nelson, R.R. (Ed. Breeding Plants for Disease Resistance. Pennsylvania State University Press, University Park.
- Young, P. A. & J. W. MacArthur, 1947. Horticultural characters of tomatoes. Bull. Texas Agric. Exper. Station No. 698.

1009



REF ID: A67084

Between the lines

11-18-75 THERE HAS BEEN PRESENTED TO THE

History of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF ORNAMENTALLY IMPROVED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION, BEING A TYPE OF PLANT OF THE GROUP OF SUBGENUS *BRUNNICA* BELONGING TO THE GENUS *BRUNNICA* AND MADE A PART THEREOF, AND THE FACTS CONCERNING THE SAME, AS WELL AS THE CLAIMS MADE AND PROVIDED HAVE BEEN COMPARISON WITH ALL THE PLANTS KNOWN TO THE PUBLIC FROM THE RECORDS OF THE PLANT VARIETY PROTECTION SYSTEM IN THE DOMESTIC AND FOREIGN COUNTRIES IN THE SAID COUNTRY AND WITH ALL THE PLANTS OF THE SAME SPECIES AND THE SAID APPLICANT(S) IS (ARE) AWARE OF THE FACTS OF THE NATURE OF THE PLANT AND THE PROTECTION UNDER THE LAW.

[illegible]

to the same extent. These animals are
suffered and caused the loss of the Plant
The same protection will be allowed
in the same manner.

1900

Paul Henry Johnston Esq
Barnard's Inn, London

London of America

INSTRUCTIONS

GENERAL: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.
- 14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- 15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

RECEIVED

AUG 31 1981



AMS, LPG&S DIV.
PVPO

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

FORM APPROVED
OMB NO. 40-R3822

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

INSTRUCTIONS: See Reverse.

1a. TEMPORARY DESIGNATION OF VARIETY Peto 94C		1b. VARIETY NAME PETO 94C 8911 2/16/83		FOR OFFICIAL USE ONLY PV NUMBER 8100159	
2. KIND NAME Tomato		3. GENUS AND SPECIES NAME Lycopersicum esculentum		FILING DATE 8/31/81	TIME 3:00 A.M.
4. FAMILY NAME (BOTANICAL) Solanaceae		5. DATE OF DETERMINATION September 5, 1980		FEE RECEIVED \$ 500.00 \$ 250.00	DATE 8/31/81 2/7/83
6. NAME OF APPLICANT(S) Petoseed Co., Inc.		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) Rt. 4, Box 1255 Woodland, CA 95695		8. TELEPHONE AREA CODE AND NUMBER 916-666-0931	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) corporation			10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION California 1962		11. DATE OF INCORPORATION 1962
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: Paul Thomas, Director of Research, Petoseed Co., Inc. Rt. 4, Box 1255, Woodland, CA 95695					

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☐ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.)		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?	14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED?		
<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED		
15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "Yes," give name of countries and dates.)			
15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "Yes," give name of countries and dates.)			

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☐ YES ☒ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

8/27/81
(DATE)

Colin C. W. [Signature]
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

13A - Peto 94C

Peto 94C was developed by conventional tomato breeding methods from crosses made in Woodland, California by Jack Hanna at the PetoSeed Research Center

Large numbers of single plant selections were made from the F-2 of each cross and the following generations. Progeny testing for resistance to Fusarium Race II (Fusarium oxysporium f. lycopersici Race II) and Verticillium Wilt Race I (Verticillium alboatrium) was carried out on each generation and the susceptible selections were discarded. Single plant selections were made from field plantings in Woodland, California and at the Peto-Chile farms located near Santiago, Chile in a winter nursery.

University of California VF90 x MHL University of Florida (Woodland, CA 1973)

↓
F-5 Peto 76 (VF2) x Peto 590 (VF)

↓
F6 331 (VF2) Woodland 1978

↓
F7 Peto 94C Woodland 1979

Evaluation of selections from the inbred line 331 (VF2) was made in several locations in California under controlled plantings during 1979 and 1980 with the 94C line being selected as having the best characteristics for processing and mechanical harvest.

Peto 94C has homozygous resistance for Verticillium Wilt Race I (Verticillium alboatrium) and Fusarium Wilt Race II (Fusarium oxysporium f. lycopersici).

→
→
→
→

↓

Johnnys

Exhibit A
Supplement 1

STATEMENT OF UNIFORMITY

Peto 94C has homozygous resistance for Verticillium Wilt Race I (Verticillium alboatrium) and Fusarium Wilt Race II (Fusarium oxysporium f. lycopersici).

Peto foundation stock seed of Peto 94C was made during 1980 and found to be very uniform in the 1981 planting. From the plantings to date there are no off types present. The seed is now in the F-9 generation.

Paloo18



8100159

Exhibit A
Supplement 2

STATEMENT OF STABILITY OF PETO 94C TOMATO
Application No. 8100159

Peto 94C was grown in the crop seasons 1980 and 1981 in trial plantings under the control of Petoseed in the following California Counties:

1. Imperial
2. Orange
3. Ventura
4. Fresno
5. San Joaquin
6. Sacramento
7. Yolo
8. Sutter

Peto 94C was found to be stable and uniform in trials located in the California Counties listed above. Seed increases of Peto 94C were made in 1980 and 1981 under the control of the Stock Seed Department of Petoseed in Saticoy, California. All lots are identified as Peto 94C. No genetic variants were found in the seed increases or field plantings. Peto 94C was found to be stable for 3 generations.

Additional plantings of Peto 94C were observed in Imperial and Fresno Counties in June, 1982. The 1982 plantings show the Peto 94C to be a stable line. No genetic variants were found in the 1982 plantings.

Standard testing procedures for Race 2 Fusarium Wilt resistant were conducted by the Plant Pathology Department of Petoseed in Woodland, California. The results of the test show that Peto 94C is 100% resistant to Race 2 Fusarium.

RECEIVED
JUL 21 1982



8100159



PETOSEED CO., INC. BREEDERS-GROWERS

P.O. BOX 4206, SATICOY, CALIF. 93004-0206 U.S.A. • TEL. 805-647-1188 CABLE PETOSEED

TELEX NO. 65-9247

REPLY TO: RT. 4, BOX 1255, WOODLAND, CA 95695

PHONE (916) 666-0931

April 13, 1984

Dr. Kenneth H. Evans, Commissioner
Plant Variety Protection Office
United States Department of Agriculture
National Agricultural Library Building
Beltsville, Maryland 20705

Dear Dr. Evans:

SUBJECT: TOMATO CERTIFICATE NO. 8100159 (PETO 94-C) AND 8100160 (PETO 95-43)

We will follow your suggestion of March 26, 1984 in regards to clarifying the PVP for Peto 94-C and Peto 95-43 by stating that Peto 94-C is most similar to Peto 94 and Peto 95-43 is most similar to Peto 95.

The major differences as noted between Peto 94-C and Peto 94 are as follows:

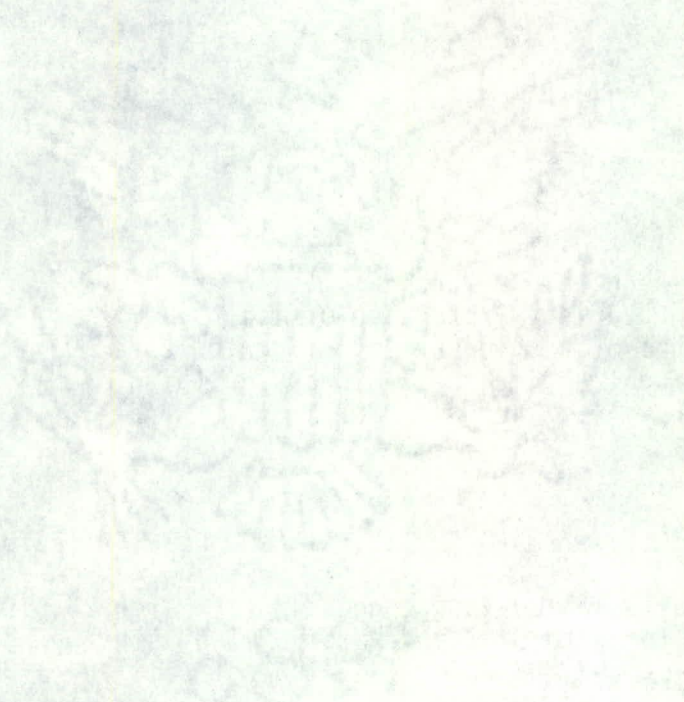
1. Peto 94-C is 9-11 days earlier than Peto 94 based upon average number of days from emergence to 90% ripe (Peto 94-C averages 115 to 122 days to 90% maturity compared to Peto 94, which averages 124 to 131 days to 90% maturity).

2. Peto 94-C has smaller plant size than Peto 94 based upon measurements of plants at 90% ripe (Peto 94-C 119 cm to 122 cm and Peto 94 128 cm to 131 cm).

The major differences between Peto 95-43 and Peto 95 are as follows:

1. Peto 95-43 has slightly larger fruit sizes, averaging 2.58 to 2.7 ounces per fruit as compared to Peto 95, which averages 2.20 to 2.26 ounces per fruit.

92-4012



Revised Exhibit B
for 'Peto 94-C'
Part B.

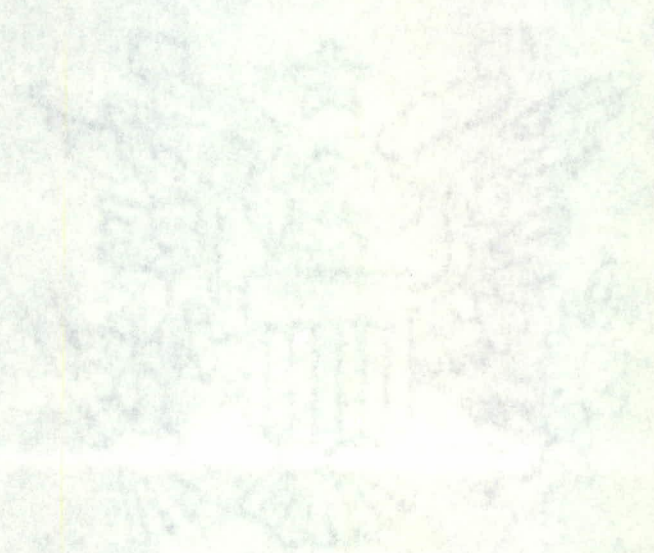
Orig. Rec'd 6/11/84

AMENDED EXHIBIT B STATEMENT - PETO 94-C TOMATO

The major differences as noted between Peto 94-C and Peto 94 are as follows:

1. Peto 94-C is 9-11 days earlier than Peto 94 based upon average number of days from emergence to 90% ripe (Peto 94-C averages 115 to 122 days to 90% maturity compared to Peto 94, which averages 124 to 131 days to 90% maturity).
2. Peto 94-C has smaller plant than Peto 94 based on measurements of plant at approximately 90% ripe (measurements are from tip of plant on one side of bed to tip of plant on opposite side of bed). Peto 94-C is 119 cm to 122 cm and Peto 94 is 128 cm to 131 cm.

12-10013



TOMATO - 4

8. PHENOLOGY (Growing degree days, or heat units on a base temperature of 51° F are preferable--but you may report either growing degree days or calendar days. Circle either "days" or calendar days, or "heat units" for growing degree days) (Continued):

Days/heat units from seed/transplant (indicate which) to once-over harvest, if applicable:

☐ ☐ ☐ ☐ days, Application variety

☐ ☐ ☐ ☐
☐ ☐ ☐ ☐

days, Check variety No. 1 UC82

days, Check variety No. 2 VF145-7879

Days/heat units from breaker to full-ripe stage:

☐ ☐ days, Application variety

☐ ☐ ☐ ☐
☐ ☐ ☐ ☐

days, Check variety No. 1

days, Check variety No. 2

Shelf life of ripe fruit:

☐ ☐ days, Application variety

☐ ☐ ☐ ☐
☐ ☐ ☐ ☐

days, Check variety No. 1

days, Check variety No. 2

- ☐ Fruiting season: 1 = long ('Marglobe') 2 = medium ('Westover')
3 = short, concentrated ('VF 145') 4 = very concentrated ('UC 82')
☐ Relative maturity: 1 = early 2 = medium early 3 = medium
4 = medium late 5 = late

9. ADAPTATION (if more than one category applies, list all in rank order):

☐ ☐ Culture: 1 = field

2 = greenhouse

☐ ☐ 1 = unstaked

2 = staked or trellised

☐ ☐ ☐ Principal use(s): 1 = home garden 2 = fresh market
3 = processing 4 = other

☐ ☐ Machine harvest: 1 = not adapted 2 = adapted

☐ ☐ Recommended region: 1 = Northeast/Midatlantic

2 = Southeast

3 = Midwest/Great Lakes

4 = South-central

5 = Great Plains

6 = Intermountain West

7 = Northwest

8 = Central California

9 = Southwest/So. California

10 = General

11 = Other (specify)

☐ Growing season temperature: 1 = cool 2 = normal warm 3 = hot 4 = general

☐ Growing season humidity: 1 = humid 2 = semi-arid 3 = general

☐ Soils: 1 = mineral 2 = organic 3 = general

10. RESISTANCE OR TOLERANCE TO ENVIRONMENTAL STRESS:

☐ High temperature fruit set (subjective evaluation based on fruit set at temperatures that normally inhibit set in area of evaluation):

1 = poor 2 = fair 3 = good ('Summertime') AREA Central California

☐ Low temperature fruit set (subjective evaluation based on fruit set at low temperatures that normally inhibit set):

1 = poor 2 = fair 3 = good ('Veecrop')

☐ Low temperature seed germination: 1 = poor () 2 = fair ()
3 = good ()

11. RESISTANCE TO FRUIT DISORDERS (Use code: 0=unknown, 1=susceptible, 2=resistant):

☐ Blossom end rot

☐ Catface

☐ Cracking, concentric

☐ Gold fleck

☐ Bursting

☐ Cracking, radial

☐ Fruit pox

☐ Graywall or blotchy ripening

7. FRUIT (3rd fruit of 2nd or 3rd cluster):

TOMATO - 3

8100159

☐ 1 Shape of transverse section:



1=round



2=flattened



3=angular



4=irregular

☐ 2 Shape of blossom end:



1=indented



2=flat



3=nipped



4=tapered

☐ 1 Shape of stem end:



1=flat



2=indented

☐ 1 Shape of pistil scar:



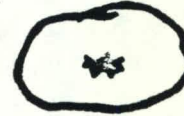
1=dot



2=stellate



3=linear



4=irregular

☐ 1 Fruit surface: 1 = smooth 2 = slightly fasciated 3 = moderately fasciated

☐ 1 Fruit color (mature-green stage):

1 = light green ('Lanai', VF145-F5) 2 = Lt. gray-green ()

3 = apple green ('Heinz 1439 VF') 4 = dark green ()

☐ 2 Fruit pattern (mature-green stage): 1 = green shouldered 2 = uniform green

☐ 5 Mature fruit color (full-ripe): 1 = white 2 = yellow 3 = tangerine
4 = pink 5 = red 6 = brownish-red

7 = greenish 8 = other (specify) _____

☐ 2 Flesh color (full-ripe): 1 = yellow 2 = red 3 = crimson 4 = other _____

☐ 1 Epidermis: 1 = normal 2 = easy-peel

☐ 2 Epidermis color: 1 = colorless 2 = yellow

☐ 2 Epidermis thickness: 1 = thin 2 = average 3 = thick

☐ 3 Thickness of pericarp: 1 = thin (< 3 mm) 2 = medium (3-6 mm) 3 = thick (> 6 mm)

☐ 3 Thickness of pericarp of check variety (same scale) Variety: _____

☐ 1 Core size: 1 = coreless 2 = small 3 = medium 4 = large

☐ 1 Core shape: 1 = solid, unbranched 2 = branched

☐ 1 Core texture: 1 = soft, edible 2 = tough or fibrous

☐ 1 Stem scar size: 1 = small () 2 = medium () 3 = large ()

☐ 2 No. of locules: 1 = two 2 = three and four 3 = five or more

☐ 5 Fruit firmness¹ (minimum table-ripe):

1 = extra-soft ('Gardener') 2 = very soft ('Valiant') 3 = soft ('Campbell 28')

4 = fairly firm ('Tropic') 5 = firm ('MH-1') 6 = very firm ('UC-82')

8. PHENOLOGY (Growing degree days, or heat units on a base temperature of 51° F are preferable--but you may report either growing degree days or calendar days. Circle either "days" for calendar days, or "heat units" for growing degree days):

Days heat units from seed to first open flower:

☐ 4 5 days, Application variety

☐ 4 5 days, Check variety No. 1

UC82

☐ 5 0 days, Check variety No. 2

VF145-7879

Days/heat units from seed/transplant (indicate which) to first ripe fruit:

☐ 0 9 0 days, Application variety

☐ 0 9 4 days, Check variety No. 1

UC82

☐ 0 9 8 days, Check variety No. 2

VF145-7879¹

¹For definitions of these subjective terms see Kader & Morris (1976) In: Proc. 2nd Tomato Quality Workshop.

1 Surface of major leaflets: 1 = smooth 2 = rugose (bumpy or veiny)
1 Leaflet: 1 = normal 2 = slightly wilted 3 = wilted
2 Shape of major leaflets: 1 = broadly ovate 2 = ovate to lanceolate
3 = slender and lanceolate, tapered to a point
2 Pubescence or hairiness: 1 = smooth 2 = normal 3 = woolly
4 Color of leaflets: 1 = light green (Earlinorth) 2 = medium green ()
3 = gray-green () 4 = dark green (UC82)
4 Color of leaf on check variety (same scale): Variety

1 Type: 1 = simple (racemose) 2 = forked (2 major axes) 3 = compound (much branched)
2 No. of flowers setting fruit (in 2nd or 3rd inflorescence):
1 = 1-4, 2 = 4-8, 3 = 8-12, 4 = 12 or more

☐ Calyx: 1 = normal (lobes awl-shaped) 2 = macrocalyx (lobes large, leaflike)
3 = fleshy

☐ Flower color: 1 = yellow 2 = old gold 3 = white or tan

☐ Style exsertion: 1 = included 2 = even with stamens 3 = exserted

☐ Style pubescence: 1 = absent 2 = sparse 3 = dense

☐ Anthers: 1 = all fused into tube 2 = separating into 2 or more groups at anthesis

☐ Fasciation (1st flower of 2nd or 3rd inflorescence):
1 = absent 2 = occasionally present 3 = frequently present

1 Abscission layer: 1 = present (pedicellate) 2 = absent (jointless)
 0 8 mm. Length of pedicel (from abscission layer or joint to calyx attachment)
 5 Mature fruit: Maximum diameter:
 1 = small cherry (< 20 mm) 2 = large cherry (20-35 mm)
 3 = cocktail (35-48 mm) 4 = U.S. extra small (48-54 mm)
 5 = U.S. small (54-58 mm) 6 = U.S. medium (58-64 mm)
 7 = U.S. large (64-73 mm) 8 = U.S. extra large (73-88 mm)
 9 = U.S. maximum large (88-100 mm) 10 = U.S. maximum large (> 100 mm)
 4 Maximum diameter of check variety, same classes as above
 (Specify name) UC82
 0 7 4 g Fruit weight 0 7 1 g Check variety UC82

8

OBJECTIVE DESCRIPTION OF VARIETY
TOMATO (*Lycopersicon esculentum* Mill.)

Choose responses which best represent your variety in the characters below. When a single quantitative value is requested (e.g. fruit weight), your answer should be the mean of an adequate, unbiased sample of plants. The applicant variety should be compared with at least one well-known standard check variety of the same type, and grown in the same trial(s). The characters on this form should be described from plants grown under normal conditions of culture for the variety. Indicate by a check whether trial data are from greenhouse ☐ or field ☒ plantings. Trials direct-seeded ☒ or transplanted ☐. Give locations and dates of trials Woodland and Saticoy, CA
1979-80. Use leading zeroes when necessary (e.g. 09 or 081, etc.). Complete this form as fully as possible for best characterization of the variety.

TOMATO - 5

12. DISEASE AND PEST REACTION (Use code: 0=not tested, 1=susceptible, 2=resistant) If claim of novelty is based wholly or in part upon disease resistance, trial data should be appended (Exhibit D) and should include date and location of trial(s), method of testing, reaction of application variety, and reaction of check varieties (identified by name).

Viral Diseases:

- | | | |
|---|--|--|
| <input type="checkbox"/> Cucumber mosaic | <input type="checkbox"/> Curly top | <input type="checkbox"/> Potato-Y virus |
| <input type="checkbox"/> Tobacco mosaic, Race 0 | <input type="checkbox"/> Tobacco mosaic, Race 1 (Tm 1) | <input type="checkbox"/> Tobacco mosaic, Race 2 (Tm 2) |
| <input type="checkbox"/> Tobacco mosaic, Race 2 ² (Tm 2 ²) | <input type="checkbox"/> Tomato spotted wilt | <input type="checkbox"/> Tomato yellows |
| <input type="checkbox"/> Other (specify) _____ | | |

Bacterial Diseases:

- | | |
|---|---|
| <input type="checkbox"/> Bacterial canker (<u>Corynebacterium michiganense</u>) | <input type="checkbox"/> Bacterial soft rot (<u>Erwinia carotovora</u>) |
| <input type="checkbox"/> Bacterial speck (<u>Pseudomonas tomato</u>) | <input type="checkbox"/> Bacterial spot (<u>Xanthomonas vesicatorium</u>) |
| <input type="checkbox"/> Bacterial wilt (<u>Pseudomonas solanacearum</u>) | |
| <input type="checkbox"/> Other bacterial disease (specify) _____ | |

Fungal Diseases:

- | | |
|--|--|
| <input type="checkbox"/> Anthracnose (<u>Colletotrichum</u> spp.) | <input type="checkbox"/> Botrytis rot or mold (<u>B. cinerea</u>) |
| <input type="checkbox"/> Brown root rot or corky root (<u>Pyrenochaeta lycopersici</u>) | |
| <input type="checkbox"/> Early blight (<u>Alternaria solani</u>) defoliation | <input type="checkbox"/> Collar rot or stem canker (<u>Alternaria solani</u>) |
| <input type="checkbox"/> Fusarium wilt, Race 2 (<u>F. oxysporum</u> f. <u>lycopersici</u>) | <input type="checkbox"/> Fusarium wilt, Race 1 (<u>F. oxysporum</u> f. <u>lycopersici</u>) |
| <input type="checkbox"/> Late blight, Race 0 (<u>Phytophthora infestans</u>) | <input type="checkbox"/> Gray leaf spot (<u>Stemphylium solani</u> , <u>S. floridani</u>) |
| <input type="checkbox"/> Leaf mold, Race 1 (<u>Cladosporium fulvum</u>) | <input type="checkbox"/> Late blight, Race 1 (<u>Phytophthora infestans</u>) |
| <input type="checkbox"/> Leaf mold, Race 3 (<u>C. fulvum</u>) | <input type="checkbox"/> Leaf mold, Race 2 (<u>C. fulvum</u>) |
| <input type="checkbox"/> Nailhead spot (<u>Alternaria tomato</u>) | <input type="checkbox"/> Leaf mold, other races (specify) _____ |
| <input type="checkbox"/> Rhizoctonia soil rot (<u>R. solani</u>) | <input type="checkbox"/> Phytophthora root rot (<u>P. parasitica</u>) |
| <input type="checkbox"/> Southern blight (<u>Sclerotium rolfsii</u>) | <input type="checkbox"/> Septoria leaf blight (<u>Septoria</u> spp.) |
| <input type="checkbox"/> Verticillium wilt, Race 1 (<u>V. albo-atrum</u>) | <input type="checkbox"/> Target leafspot (<u>Corynespora casiiicola</u>) |
| <input type="checkbox"/> Other fungal diseases (specify) _____ | <input type="checkbox"/> Verticillium wilt, Race 2 (<u>V. albo-atrum</u>) |

Insect and Pests:

- | |
|--|
| <input type="checkbox"/> Colorado potato beetle (<u>Leptinotarsa decemlineata</u>) |
| <input type="checkbox"/> Root knot nematode (<u>Meloidogyne incognita</u>) |
| <input type="checkbox"/> Spider mites (<u>Tetranychus</u> spp.) |
| <input type="checkbox"/> Sugar beet army worm (<u>Spodopora exigua</u>) |
| <input type="checkbox"/> Tobacco flea beetle (<u>Epitrix hirtipennis</u>) |
| <input type="checkbox"/> Tomato hornworm (<u>Manduca quinquemaculata</u>) |
| <input type="checkbox"/> Tomato fruitworm (<u>Heliothis zea</u>) |
| <input type="checkbox"/> Whitefly (<u>Trialeurodes vaporariorum</u>) |
| <input type="checkbox"/> Other (specify) _____ |

Pollutants:

- | | | |
|--------------------------------|---|--|
| <input type="checkbox"/> Ozone | <input type="checkbox"/> Sulfur dioxide | <input type="checkbox"/> Other (specify) _____ |
|--------------------------------|---|--|

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